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ABSTRACT

A study employing a traditional equity framework was used to calculate the equity of Texas' school-finance structure. Horizontal and vertical equity as well as fiscal neutrality are used as principles in the study. Data on school-district enrollments, tax assessments, and state revenues from the Resource Planning Office of the Texas Education Agency were used in the study. Results show reductions in revenue apportioned across districts because of the failure of the state to meet all of its funding commitments in 1991-92. Consequently, there is a significant deterioration in the equity of revenue distribution to school districts. Overall, except for a small number of districts and an even smaller number of students, Texas' school-finance structure is highly equitable. In conclusion, the school finance system established in Texas in response to state supreme court rulings in Edgewood Independent School District v. Kirby is the most equitable in the nation. The problem the state faces is how to fully fund the system that has been established, and without adequate funding, how to most equitably distribute the funds that are available. Even if such a mechanism can be established, there is no guarantee that the state can afford to fully implement the plan. (Contains 12 references.) (JPT)

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A School Finance Dilemma for Texas: Achieving Equity in a Time of Fiscal Constraint

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EA 024 872

TABLE OF CONTENTS

A Brief History of Texas School Ffinance....1
Conceptual Framework....3
Measuring School Finance Equity....3
Methodology....4
Measures of Horizontal Equity....4
Measures of range....4
Gini Coefficient....4
McLoone Index....5
Measures of Fiscal Neutrality....5
Correlation....5
Elasticity....5
Slope....5
Data Sources....5
The Equity of the Texas School Ffinance System: Results....6
Equity of the Current System....6
Historical Comparisons....8
Revenue Distribution and System Equity by Percentage of Pupils....8
Conclusions and Recommendations....9

Abstract

The results of this traditional school finance equity study show that the school finance system established by the State of Texas in response to the State Supreme Court Rulings in *Edgewood v. Meno* is one of the most equitable in the nation. It argues that the problem facing the state is not how to improve the general equity of the system, but rather how to fully fund the system that has been established, and in the absence of adequate funding, how to most equitably distribute the funds that are available.

A SCHOOL FINANCE DILEMMA FOR TEXAS: ACHIEVING EQUITY IN A TIME OF FISCAL CONSTRAINT

by

Lawrence O. Picus
and
Linda Hertert

Three times in the last three years, the Texas Supreme Court has held that state's system for financing K-12 education unconstitutional.[1] In their most recent ruling, the court invalidated the tax system enacted under Senate Bill 351 (SB 351), and gave the state until June 1993 to create a constitutional funding mechanism.[2] The question the legislature now faces is whether they need only change the implementation mechanics of SB 351 or whether they must also address the issue of equity to meet the court's definition of constitutional efficiency.[3] If the legislature chooses to concentrate on designing a constitutional way to continue the existing school finance formula, it can avoid re-opening the politically more difficult question of how resources are to be distributed across districts. Even if these thorny issues can be resolved, Texas lawmakers still face the daunting task of maintaining the existing level of funding at a time when the state faces the real possibility of having inadequate resources to fully fund the formula approved and implemented under SB 351.

These are complex and difficult problems. The purpose of this paper is to help inform the deliberation process by assessing the equity of the school finance system currently operating in Texas. Using traditional school finance equity measures, we will show that equity has improved substantially under SB 351 for virtually all of the state's school children. The major jeopardy to this equity is the state's inability to fully fund its commitment to local school districts. Our research shows that the underfunding of the SB 351 program in 1991-92 has had substantial consequences on the level of equity across districts. Further, our analysis shows that the price of improving equity any further will require either dramatic increases in total education funding, or will require forcing the few very rich districts to make massive reductions in their spending.

This article begins with a brief history of Texas school finance. Readers interested in a more detailed treatment of the issue are referred to Picus and Hertert (1992), Hobby and Walker (1991), Walker (1990), and Walker and Thompson (1990). Following this history, an analysis of the equity of the Texas school funding formula is presented along with a comparison of a similar equity study conducted by Verstegen (1987). The final section of this paper offers some conclusions and policy recommendations based on the study's findings.

A BRIEF HISTORY OF TEXAS SCHOOL FINANCE

There have been two major challenges to the Texas school finance system in the past twenty years. In 1971, a federal district court found in Rodriguez v. San Antonio that the state's school finance system, which included wide variation in educational expenditures directly attributable to local property wealth per pupil, was in violation of the equal protection clause of the United States Constitution.[4] The case was appealed directly to the United States Supreme Court, which ruled in 1973 that the Texas system was Constitutional in a narrow 5-4 decision.[5] Although this legal challenge was unsuccessful in requiring changes in the way Texas funded public education, by the end

of 1984 a number of substantial changes in the school finance structure had been implemented, many of them aimed at improving the equity of the system.

In 1984, however, a group of poor school districts, including Edgewood Independent School District, filed suit in a state court alleging that inter-district expenditure differences violated their rights under the Texas constitution.[6] The plaintiffs agreed to hold their action pending the outcome of a special session of the Texas Legislature. In July 1984, the legislature enacted House Bill 72 (HB 72) which included a number of significant improvements in the equity of the school funding system. Verstegen (1987) found that the new system substantially improved the equity of the system, stating "the data indicated improvement over time in the long struggle of equalizing resources in the State of Texas and a robust response by lawmakers to issues raised by Rodriguez " (p. 330).

Despite these improvements, the plaintiffs re-filed the suit in 1985 as Edgewood v. Kirby.[7] In June 1987, a district court ruled the state's public school finance system unconstitutional. The decision was reversed by an appellate court in October 1989, but the Texas Supreme Court later unanimously upheld the district court, finding that the school finance system violated the state constitution's "efficiency" provision.

The legislative response to this ruling was Senate Bill 1 (SB 1), enacted in early June 1990. The system created by SB 1 was not developed easily. The legislature and the governor fought with each other over the level of taxes to be raised, and other accountability and efficiency issues (Hobby and Walker, 1991). SB 1 was found unconstitutional by a state district court in July 1990. This decision was upheld in early 1992 by the Texas Supreme Court which ruled that SB 1 "leaves essentially intact the same funding system with the same deficiencies we received in Edgewood I."[8]

Following a clarifying opinion, known as Edgewood IIa, the legislature passed SB 351 on April 22, 1991. This legislation established the three-tier funding formula currently in use in Texas. The central feature of the first tier is the County Education Districts (CEDs). These districts were designed to get around the prohibition on state-wide recapture in the Texas Constitution by levying and distributing a portion of the school property tax within each county or groups of counties. As Tonjes (1991) points out, this county-wide equalization is mathematically identical to a state recapture program, but is politically more acceptable.

The second tier of the system created by SB 351 is a guaranteed yield program, which assures that districts will receive a fixed amount of revenue per pupil for each penny of tax effort, regardless of the district's wealth. SB 351 provides equalization for up to $0.45 of local levy effort. For 1991-92 the guarantee was $21.50 per pupil for each penny of tax effort. This was to increase to $28.00 per pupil by 1994-95.

The third tier is an unequalized local property tax. School property taxes are capped at $1.50. In 1991-92, the CED tax rate was $0.72. With the next $0.45 equalized through tier two, the maximum unequalized school property tax rate is $0.33. SB 351 was to be fully implemented by 1994-95. At that time, the CED tax rate would rise to $1.00, and with the $0.45 equalized program in tier two, the unequalized portion of the school tax rate would only be $0.05.

Like its predecessors, SB 351 was challenged in the courts.[9] Although a number of issues were brought forward, the court initially focused only on the constitutionality of the CED system, with all other questions reserved for separate consideration. In August

1991, the district court ruled the CEDs constitutional. On direct appeal, the Texas Supreme Court on January 30, 1992 held the CED tax system unconstitutional. The court's ruling came one day before property taxes were due. In a surprising decision, the court deferred their ruling until June 1, 1993, in effect sanctioning the CED tax for both the fiscal years 1991-92 (the current year) and for 1992-93, the next year. This gave the legislature until June 1993 to find an alternative. As the legislature begins debating what to do next, it is important to consider what, if any, success has been achieved so far. The next section of this paper answers questions about the equity of the school finance system created by SB 351, and compares the equity of that system with earlier equity findings.

CONCEPTUAL FRAMEWORK

In this analysis of the equity of the Texas school finance program, we have used the traditional equity framework first suggested by Berne and Stiefel (1984) and elaborated by Odden and Picus (1992). This framework provides the technology for calculating the degree of equity in a state's school finance structure using measures of dispersion and relationship statistics.

Measuring School Finance Equity

The equity object of our analysis is children. While other equity objects could be considered, particularly taxpayers, we have chosen children as the key group of concern because they are the primary "clients" of the education system. Odden and Picus (1992) suggest three different but related children's equity principals:

- Horizontal Equity
- Vertical Equity
- Fiscal Neutrality

Horizontal equity refers to the "equal treatment of equals." A number of statistical measures including the range, restricted range, Federal range ratio, McLoone Index, coefficient of variation and Gini coefficient are used to measure the horizontal equity of the Texas school finance system.

Vertical equity refers to the "unequal treatment of unequals." It recognizes the differences among children and addresses the education imperative that some students deserve or need more services than others. Two approaches have been taken by states to provide funds for these additional services. One is to use categorical grants for specific programs outside of the state general aid formula, and the second is to establish a system of pupil weights and made the funding adjustments through the general aid formula. The goal in both cases is to insure that funding for these programs is not related to a district's fiscal capacity. If the first case, equity analyses are generally conducted by eliminating categorical programs and conducting the analysis for general revenues. In cases where pupil weights are used, a traditional horizontal analysis using the weighted pupils can be conducted to assess the equity of a funding system (Odden & Picus, 1992).

The Texas school finance system includes program cost differentials for compensatory education, special education, vocational education, bilingual education and gifted and talented education. In addition, adjustments are made for small and sparse schools and the state calculates a cost of education index to account for differences in the cost of educational inputs across the state. All of these factors are used to "weight" each district's pupil count and thus account for the vertical differences across districts.

Fiscal neutrality is the principal that educational resources should not vary with local fiscal capacity as measured by property wealth per pupil, or some other measure of financial ability. This study considers the correlation between revenues per pupil and property wealth per pupil to determine the relationship between these two variables. We also measure the wealth elasticity to ascertain the magnitude of the relationship between the two variables. For example, even if the correlation between revenues and wealth is high (i.e. close to 1), a low elasticity would indicate that even a very large increase in wealth is associated with a small increase in revenues, and thus reasonably fiscally neutral.

Barro (1989) argues that to gain a truly accurate picture of a state's school finance equity, all statistical measures should be weighted by the number of pupils in each district to assure that small districts do not have a disproportionate impact on the statistical measures and to truly reflect the impact of large districts on the distribution of educational resources. Since the object of our analysis is equity for children, we have weighted all of the statistics described below by pupils as suggested by Barro.

Another important factor to consider in analyzing the equity of a state's school funding formula are price differentials across districts. Barro (1989), Chambers (1981) Berne and Stiefel (1984) and others have argued that school districts pay different prices for the goods they purchase based on a number of factors including location, local labor markets, and working conditions. The state of Texas has developed a cost of education index for use in distributing funds to school districts. This index was used to deflate district revenues as part of our analysis.

METHODOLOGY

Equity measures can be divided into two categories, those measuring horizontal equity and those measuring fiscal neutrality. Following the framework in Odden and Picus (1992), the following measures were used to determine the equity of funding formula established by SB 351:

Measures of Horizontal Equity

Measures of dispersion: Traditional statistical measures of dispersion including the mean, median, standard deviation and coefficient of variation were calculated to provide information on variations in per pupil revenues across districts. The coefficient of variation is the standard deviation divided by the mean, expressed as a percentage, and thus gives a measure of the variability around the mean observation. Other measures of dispersion used in school finance equity analyses are described below.

Measures of range. In addition to calculating the difference between the two extremes, the restricted range which measures the difference between per pupil revenues in the districts at the 95th and 5th percentiles were calculated. In addition, deciles based on weighted pupils were analyzed. Because range measures are sensitive to inflation, the Federal Range Ratio was also calculated to facilitate comparisons with previous analyses. The Federal Range Ratio is the difference between the values of he observations at the 95th percentile and the 5th percentile, divided by the value at the 5th percentile.

Gini Coefficient. The Gini Coefficient provides a measure of the distribution of revenues to all pupils. If the value of the Gini Coefficient is zero, then each proportion of students receives an identical proportion of the total revenues. To the extent that the Gini coefficient exceeds zero, the greater the proportion of revenue going to high revenue

districts. If there is a similar relationship between district wealth and revenues, then a greater proportion of the revenue would be going to the wealthy districts.

McLoone Index. The McLoone Index measures the equity of the bottom half of a distribution by comparing the total revenue available to all students in districts below the median to the total revenue needed for all students in those districts if they received the median per pupil revenue. A value of 1.0 indicates all of the districts in the bottom half of the distribution are spending at the median, and that there is perfect equity among the lower half of the distribution.

Measures of Fiscal Neutrality

Correlation. Correlation is a measure of fiscal neutrality which measures the linear relationship between per pupil revenues and per pupil property wealth. In the absence of strict spending limitations and complete fiscal neutrality, this relationship would be random, and the correlation between these variables would be very low.

Elasticity. The elasticity is similar except that it measures the relationship between the two variables in percentage terms. Because it is easier to understand, only the elasticity results are presented here. The regression results also provide information on the proportion of variation in per pupil revenues that is explained by differences in per pupil property values.

Slope. These measures are needed to fully understand the fiscal neutrality of a school finance system. The slope is simply the coefficient from a simple regression where the dependent variable is per pupil revenue and the independent variable property wealth per pupil. The slope measures how much a given increase in property wealth per pupil will change per pupil revenues.

DATA SOURCES

The data for this study were provided by the Resource Planning Office of the Texas Education Agency. Data on school district enrollments, tax assessments and state revenues were made available for this analysis. Under Texas law, the Weighted Average Daily Attendance (WADA) figure used to allocate resources for the first tier of the finance formula differs slightly from that used in the second tier. Tonjes (1992) points out that the difference is very minor, and that the selection of one measure or another makes little difference in the outcome of an equity analysis. We selected the WADA figure used for the second tier of the finance formula for our analysis because it already included program adjustments for special education, compensatory and bilingual education, as well as for the state's adjustments for scarcity and small schools. As a result of a legislative compromise, this figure only accounts for half of the state's cost of education index. Thus, we adjusted the second tier WADA count to take full account of the cost of education index. Dividing a district's total revenue by this adjusted WADA figure provides a per-pupil revenue figure for each district in the state that includes vertical equity adjustments for different student needs, as well as adjustments for small schools, remote (and consequently high cost) locations, and price differentials. To calculate the per pupil property wealth and to weight the equity measures analyzed below, the second tier WADA figure was adjusted to remove the cost of education index.

Two other adjustments to district per pupil revenues were considered in the analysis. First, under Texas law, school districts receive state assistance to provide transportation to and from school. Because state aid is based on spending for transportation, and this spending is a function of district size and location, not wealth,

many school finance analysts do not include transportation funding in equity analyses (Berne and Stiefel, 1984). In addition, Texas has a career ladder program for teachers. State funding for this program is based on district and teacher participation, and similarly is not related to differences in wealth. Thus, we conducted our analyses both with and without the revenues received by each district for transportation and the career ladder.

Second, during the course of the 1991-92 fiscal year, state financial resources were not adequate to fully fund the program established by SB 351. Under these circumstances, the state reduces its aid to each district. How these funding reductions are implemented has a significant impact on the equity of the finance formula. Basically, each district's proration, as it is called in Texas, is a function of the amount of money it receives from the state and its property wealth. Thus, the poorer the district, the smaller its share of the total reduction. While on the surface this appears to be equitable, there are 121 districts in the state that do not receive any aid (other than the constitutionally guaranteed basic aid) under SB 351. Since the state can not take away what it has not given to districts, these 121 districts, which are the wealthiest districts in the state, are not affected by reductions in state revenue. Moreover, since the proration is related to a district's wealth, there are a number of wealthy districts that receive small amounts of state aid, whose proration, under the formula used in 1991-92, would be greater than the aid they received from the state. As a result, a portion of the funds that would have been taken from those districts has to be allocated among the remaining, and less wealthy districts.

Because these two factors, the transportation and career ladder allocations and the proration or reduction in state revenues due to inadequate state resources, have an impact on the equity of the school finance system, the results reported below include four revenue measures for each district. These revenue measures are:

1. Total revenue under the terms of SB 351
2. Total revenue under SB 351 minus allocations for transportation and career ladder
3. Total revenue under SB 351 minus the state proration
4. Total revenue under SB 351 minus transportation, career ladder and proration

THE EQUITY OF THE TEXAS SCHOOL FINANCE SYSTEM: RESULTS

This section describes the results of our equity analysis of the Texas school funding formula under SB 351. The first part reviews traditional measures of school finance equity and assesses the equity of the finance system in Texas under SB 351 using different revenue assumptions. The second section provides an historical comparison, while the third addresses one of the critical issues still before the courts-- the proportion of students in the state for which equity must be achieved.

Equity of the Current System

Table 1 displays the equity statistics for the four revenue measures defined above for all 1,044 districts in the state of Texas. As the first column in Table 1 shows, under the terms of SB 351, the mean total revenue received by school districts was $3,181 per WADA, and the median revenue per WADA $3,142. The standard deviation was $405, and the coefficient of variation 12.74 percent. The range in revenue per WADA was over $36,000. This figure is the result of one very high spending district where total revenue amounted to $38,425 per WADA. The restricted range, which eliminates the outliers at

both the top and bottom of the distribution was only $965 per WADA, and the Federal Range Ratio was 0.35. These measures of dispersion show relatively small per pupil spending differences when outliers are excluded.

Analysis of other horizontal equity measures provides more insight into the equity of the system. The McLoone Index, is 0.931. With a total state enrollment of 3,845,232 WADA, and a median revenue per WADA of $3,142, it would cost $414.4 million to bring all students up to the median revenue level. This is calculated by subtracting the McLoone Index from one (1.0 - 0.9314) = 0.0686 and multiplying it by the median per WADA revenue and by the half of the students below the median [(0.0686 * $3,142 * (.5 * 3,845,232)]. The Gini Coefficient which measures the distribution of revenue to all pupils is 0.06 percent. This means that in 94 percent of the cases, there were equal proportions of revenue for equal proportions of students.

As indicated above, the pupil transportation and career ladder programs offer revenues to school districts on the basis of measures unrelated to property wealth and other spending, and could arguably be removed from the analysis. This is done in column 2 of Table 1, which displays the equity statistics on the basis of per WADA revenues under SB 351 as written, minus allocations for transportation and career ladder. As that column shows, the mean expenditure per WADA declines by over $100 to $3,068. The other horizontal equity measures show little change, indicating that controlling for these two features of the Texas school finance system makes little difference in analyzing the student equity.

A bigger problem has to do with the reductions in revenue apportioned across districts in the state that resulted from the inability of the state to meet all of its commitments to SB 351 in 1991-92. The reductions in revenue experienced by districts ranged from zero in districts that received no state aid outside of the constitutionally required basic grant, to over $30 million in Houston, the state's largest district. Interestingly, as shown in the third column of Table 1, there is little change in the equity statistics, except for the Gini Coefficient, which increases dramatically to 0.304 percent. Column 4 of that table presents similar results when both transportation and career ladder and the proration are subtracted from each district's SB 351 revenue allowance. Again, there is relatively little difference across the equity statistics presented, except for the Gini coefficient, which increases to 0.34.

This finding is somewhat surprising, if not so much because it represents a decline in the equity of the system, but that it is so dramatic. The reason for this change in the Gini coefficient has to do in part with the fact that the Gini was calculated at the district level rather than the student level. That is, it is comparing the percent of total pupil and the percent of total revenues by district rather than by pupil. The effect of calculating the Gini in this fashion is to enhance the difference in its value when proration is taken into account. Another contributing factor to the increase in the Gini coefficient is the fact that the 121 wealthiest districts in the state are not subject to proration reductions because they receive no state aid above the basic grant. The Gini coefficient indicates that there is a significant deterioration in the equity of the distribution of revenues to school districts when the state is unable to fully fund its commitment to the finance formula.

Measures of fiscal neutrality show a similar pattern of general equity with a problem among high wealth districts. Column 1 of Table 1 shows that there is a relatively high correlation between wealth and revenue of 0.671 under the provisions of SB 351. However, the wealth elasticity is a low 0.087 percent, meaning that for each $1,000 increase in wealth per WADA, revenues only increase by 87 cents per pupil, or for each $100,000 per pupil, revenues increase by $86.70. This implies that for the vast

bulk of school districts in the state, increased wealth leads to relatively small increases in per pupil spending.

The problem occurs because of the few small, very wealthy districts. For example, an elasticity of 0.087 percent indicates that a district with an assessed value of $500,000 would spend an estimated $423 more than the poorest district in the state which has an assessed value per pupil of $11,800. The wealth of only 5 percent of the districts in the state exceeds $500,000. More importantly, these districts enroll just under 1 percent of the states weighted FTE pupils, implying that the high correlation reported above is for the most part the result of a few very high wealth, high spending, low enrollment districts. There is very little change in these fiscal neutrality statistics when allocations for transportation and the career ladder are removed, nor when proration is considered. This confirms that except for a very small number of districts and even smaller number of students, the equity of the Texas system is quite high.

Historical Comparisons

In an earlier analysis of school finance equity in Texas, Verstegen (1987) compared her findings for 1986, with an analysis done ten years before in 1976. Table 2 compares her data with the findings presented above. As the table shows, the equity of the Texas school finance system has shown improvements in all of the equity measures available over time except for the correlation of wealth and revenue, which showed a small decrease between 1976 and 1986, but increased by 1992 to a level higher than 1976. This increased correlation is offset however by the continued decline in the elasticity over time. Moreover, the two measures of dispersion presented, the coefficient of variation and the Federal Range Ratio both show continued improvement over time. Finally, the McLoone Index has continued to move closer to 1.0, indicating that equity for the bottom half of the students has improved over time.

This analysis shows that the changes in the school funding formula that have been enacted by the Texas Legislature have led to greater equity in school finance over the past sixteen years. During that period of time, total revenues for K-12 education in Texas have increased from $3.7 billion in 1975-76 to $16.6 billion in 1991-92. The state share of total revenue has decreased during that time span from 50.1 percent to 44.8 percent. While these substantial commitments on the part of the state have led to greater equity, it has still not satisfied the Texas Supreme Court. The following section analyzes the distribution of school revenues by pupil percentiles.

Revenue Distribution and System Equity by Percentage of Pupils

Table 1 shows that for all four revenue measures analyzed above, the restricted range (the difference between the observation at the 95th pupil percentile and that at the 5th pupil percentile) is less than $1,000. Moreover, Tonjes (1992) points out that if the features of SB 351 are fully implemented and funded, by 1994-95, the fiscal neutrality components of the system will fully encompass 93.1 percent of the pupil in the state. Moreover, the large share of property taxes collected through the CEDs will assure that districts experiencing rapid growth in their property values will have to share that tax advantage with other districts in the CED, and consequently with the rest of the state, effectively minimizing the disequalizing impact of such increases.

Table 3 displays the mean revenue per WADA by pupil percentile. It is important to remember that the percentile categories represent students not districts. To arrive at the values for each column of the table, all 1,044 school districts were ranked by per pupil spending, and the cumulative percentage of pupils was determined. The value that

appears in the table was derived from the first district where the cumulative percentage of pupils was equal to the value in the percentile column. For example, the value of $2,741 in the second column of Table 3 was taken from the first district where a value of 0.5 or greater was found in the cumulative percent of pupils calculation. The figure representing the first percentile and the 100th percentile represent the lowest and highest spending districts in the state respectively.

Table 3 confirms what analysis of the restricted range suggests -- the bulk of the students in the state are concentrated in districts with very minimal differences in per pupil revenues. While one district has revenues exceeding $38,000 per WADA, the four districts with SB 351 revenues exceeding $10,000 per WADA have less than 2,000 total WADA, and represent less than 5/10 of one percent of the students in the state of Texas. Moreover, the districts with SB 351 revenues of more than $6,000 only represent 0.12 percent of the state's students. As Table 3 shows, the district at the 99th percentile has revenues of $4,326 per WADA, and the district as the 95th percentile revenues of $3,706 per WADA.

Table 4 presents equity statistics for the state without the top one percent and top five percent of the students. As the statistics presented show, elimination of the highest spending districts improves the equity measures. The range is reduced considerably, and the correlation and elasticity show similar reductions. Since the McLoone Index measures inequities at the bottom half of the distribution, it is not surprising to find that it changes little (the change based on a slightly different median). As before, the Gini Coefficient shows a dramatic increase when proration is accounted for.

In Edgewood II, the court ruled that equity had to be established for all districts in the state (Picus and Hertert, 1992). While the court seemed to back off this requirement somewhat in Edgewood IIa, it is not clear how they would rule on the provisions of SB 351; in Edgewood III, the court declared the CEDs unconstitutional, and did not address the equity of the system created by that law. If the legislature found a constitutional way to implement the CED system, the remaining question would be whether or not the court would find the distribution of revenues to school districts "efficient" as called for in the Texas constitution.

As this analysis shows, if the highest revenue districts containing the top one percent of the students are allowed to continue raising the revenue they currently have access to, there is a great deal of equity for the remaining 99 percent of the students. the equity improves dramatically if the top five percent of the students are excluded. Moreover, trying to find a politically acceptable solution that the state can afford which includes all 1,044 districts will be much more difficult.

CONCLUSIONS AND RECOMMENDATIONS

To an outside observer, it would appear that to date, the legislature has been unable to design an equitable school funding system that improves school finance equity, hence the continual rulings by the state's highest court. Yet, as this paper shows, in response to the court's decisions, Texas has, in fact, achieved a level of school finance equity far greater than most of the other 50 states. Therefore, the problem facing the legislature may not be one of designing a more equitable system, but one of creating a constitutional mechanism to maintain the current fund distribution across the state's school districts. Even if such a mechanism can be found, or a constitutional amendment passed to legalize the current system, there is no guarantee that the state can afford to fully implement the plan.

The legislature faces three difficult problems: 1) determining what an equitable, or efficient, system is; 2) designing a mechanism that will meet the efficiency or equity standard developed; and 3) providing adequate funding for that system.

The court rulings to date do not give a great deal of information as to whether or not a 95 percent equity standard would be acceptable. In Edgewood II, the court seemed to state that a 95 percent standard would not meet the efficiency requirements of the Texas Constitution, and implied that the only acceptable solution would be perfectly equal access (Yudof, 1991). However in their subsequent ruling in Edgewood IIa, the justices seemed to leave a little room for acceptance of an equity standard of less than 100 percent when they held that perfect fiscal neutrality was not required once an efficient system had been implemented (Yudof, 1991). The court has also focused its attention on a district equity standard rather than a pupil equity standard as established by Serrano[10] in California. Because the highest spending districts are very small, an equity standard based on students would make it easier to reach the goal if the court ever allows a standard of something less than 100 percent.

Unfortunately, the court's rulings provide little help as to how the equity standard might be achieved, although the court did encourage the legislature to consider consolidation of the tax base as an acceptable method for reducing the wealth disparities across the state's 1,044 school districts. The legislative response was SB 351 which relied on the CEDs to consolidate only the property taxation functions of the school districts. The legislature has little clear guidance from the Texas Supreme Court about what will meet the constitutional provision of "efficiency" (see Picus & Hertert, 1992).

Although the court found the system unconstitutional in Edgewood III, their ruling focused on the narrow issue of the constitutionality of the CED tax mechanism. The question of efficiency has not been tried in the lower court, and there is no way to tell how the district court or the Supreme Court will view the equalization provisions of SB 351. One hint that the system might be found acceptable is the great lengths to which the Supreme Court Justices went in justifying their decision to allow SB 351's funding system to remain in place for two years. It is impossible to speculate what the court will do if it hears a case on the efficiency merits of that law. However, the court's willingness to delay implementation of their ruling on the unconstitutionality of the CED tax until June 1993, offers hope that the court might be willing to accept the distribution of funds under SB 351 as meeting the constitution's efficiency clause.

The data presented above show that if fully funded, SB 351 would have produced the most equitable distribution of educational funds in Texas for at least the past 20 years, and most likely in Texas history. Moreover, simulations of SB 351 when fully implemented in 1994-95 indicate that an even more equitable distribution of educational resources will exist at that time (Tonjes, 1992). As a result, it appears that the legislature's time would be better spent finding ways to make the current system pass the scrutiny of the Supreme Court.

In 1991-92, the state fell short of its fiscal commitment to school districts by over $300 million. When the Texas Legislature met in special session in November and December of 1992, it became clear that new funds for K-12 education would be limited to education's proportional share of new revenues available to the state. This amounts to $650 million, substantially short of the $2.8 billion in additional funds needed to fully fund SB 351's provisions during the 1993-95 biennium.

At the same time, there appears to be a strong mandate from the people of Texas that higher taxes are an unacceptable alternative. This not only limits the options available to the legislature, it may well doom any proposal that is able to pass both the Texas Senate and House of Representatives. Simply gaining approval of a 95 percent standard, whether through a constitutional amendment or through a State Supreme Court ruling, would not fully resolve the dilemma facing Texas. Short of raising state taxes, the only option available is to create a highly equalized property tax funding system for the schools. However, that would require substantial increases in local property taxes. It is unlikely that Texas property taxpayers would accept such increases, particularly in light of the fact that property taxes in most districts across the state were raised in response to SB 351.

While there is no guarantee that the legislature will enact a system that maintains the current County Education District system in a fashion that meets the court's approval, a number of factors could conspire to make passage of the system possible. Our analysis shows that the system is highly equalized for 95 percent of the students in the state. This standard has been acceptable in many other states, notably California (Picus, 1991), and seems reasonable for Texas as well. Moreover, the costs of exceeding a 95 percent standard are very high. If equalization above the 95th student percentile is to be achieved, one of three highly unlikely events must occur:

1. The state would have to find the resources to further "equalize up" spending in the poor districts. Since the cost of full implementation of SB 351 amounts to $2.8 billion more than is currently spent on education, going beyond this figure seems unlikely. Tonjes' (1992) calculations show that when fully funded, 94 percent of the students in the state will be in equalized districts. Another way to achieve this goal is to allow state recapture, and use the property wealth of the richest districts to fund the equalization of the poor districts.

2. The legislature would have to implement a massive school district reorganization to minimize the wealth disparities that currently exist. This would have the same impact as creation of a recapture program.

3. The constitution would have to be changed either to allow recapture or to define efficiency. Proposals were being considered by the special legislative session at the end of 1992 that would have placed measures on a special election ballot to do both of these things. None of them passed, and it is not clear how they will be dealt with by the new Legislature when it convenes in January 1993.

In conclusion, Texas finds itself on the horns of a policy dilemma. Faced with a court requirement to improve school finance equity, the legislature responded with a system that was ruled unconstitutional on a technicality. It is unclear whether or not the system will meet the court's guidelines if a constitutional way to raise County Education District taxes can be found. Our analysis indicates that SB 351 affords Texas an equitable system for distributing educational funds. If a constitutional mechanism can be developed by the new Legislature to support this funding distribution, the State can meet the Court imposed June 30 deadline. Moreover, if a constitutional mechanism can be found, it is not clear that the state has sufficient resources to fund the system it creates.

Footnotes

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[1]Edgewood Indep. Sch.. Dist. v. Kirby, No. 362, 516 (259th Dist. Ct. Travis Cty. Tex. June 1, 1987), rev'd 761 S.W. 2d 859 (Ct. App. Tex. 1988), rev'd 777 S.W. 2d 391 (1989) [hereinafter Edgewood II; Edgewood Indep. Sch. Dist. v. Kirby, No. 362,516, slip op. (250th Dist. Ct., Travis Cty., Tex. Sept 24, 1990), 804 S.W. 2d 491, 495 (1991) [hereinafter Edgewood III; Carrollton-Farmers Branch Indep. Sch. Dist. v. Edgewood Indep. Sch. Dist., No. 1469, slip op. (Tex Jan 30, 1992) [hereinafter Edgewood III/..

[2]Edgewood III.

[3]Earlier Supreme Court rulings in Edgewood found the Texas school funding system unconstitutional on the basis of the "efficiency "language in the state constitution's education clause.

[4]Rodriguez v. San Antonio Indep Sch. Dist., 337 F. Supp. 280 (W.D. Tex. 1971), rev'd 411 U.S. 1 (1973).

[5]San Antonio Indep. School District v. Rodriguez, 411 U.S. 1 (1973)

[6]Edgewood Indep. Sch. Dist. v. Bynum.

[7]Edgewood I.

[8]Edgewood II.

[9]Edgewood III.

[10]Serrano v. Priest, 96 Cal. Rptr. 601, 487 P.2d 1241, 5 Cal. 3d 584 (1971).

Table 1

Measures of the Equity of the Texas School Finance Formula Under SB 351 in 1991-92 Using Alternative Revenue Totals: All Districts

Measure	Total Revenue Under SB 351	Total SB 351 Revenue Minus Transp. and Career Ladder	Total SB 351 Revenue Minus Proration	Total SB 351 Revenue Minus Transp. Career Ladder and Proration
Horizontal Equity				
Mean ($)	3,181	3,068	3,129	3,016
Median ($)	3,142	3,028	3,100	2,999
Standard Deviation ($)	405	400	407	403
Range ($)	36,189	36,285	36,217	36,285
Restricted Range ($)	965	979	988	974
Coefficient of Variation (%)	12.74	13.03	13.03	13.35
McLoone Index	0.931	0.931	0.920	0.913
Gini Coefficient*	0.06	0.061	0.3	0.34
Federal Range Ratio	0.35	0.37	0.37	0.38
Fiscal Neutrality				
Correlation	0.671	0.678	0.666	0.672
Elasticity (%)	0.087	0.089	0.082	0.084

*This statistic is based on districts as a unit, unweightedby the number of ADA.

Table 2

Historical Comparison of Texas School Finance Equity

	Year			Change			
				1976-1992		1986-1992	
Measure	1976	1986	1992	Actual	Percent	Actual	Percent
Coefficient of Variation	22.5	15.9	12.7	9.8	43.56	3.2	20.13
Federal Range Ratio	0.89	0.48	0.35	0.54	60.67	0.13	27.00
McLoone Index	0.884	0.933	0.931	0.047	5.32	0.002	0.21
Correlation	0.62	0.60	0.67	-0.05	-8.06	-0.07	-11.67
Elasticity	0.13	0.10	0.087	0.43	33.08	0.13	13.00

Source for 1976 and 1986 data is Verstegen (1987). Data for 1992 calculated by the authors from data provided by the Texas Education Agency

Table 3
Comparison of Revenue Per WADA by Percentile

Percentile	Total Revenue Under SB 351	Total SB 351 Revenue Minus Transp. and Career Ladder	Total SB 351 Revenue Minus Proration	Total SB 351 Revenue Minus Transp. Career Ladder and Proration
1	2,523	2,405	2,492	2,359
5	2,741	2,622	2,660	2,562
10	2,748	2,651	2,676	2,566
20	2,912	2,801	2,863	2,754
30	3,023	2,908	2,969	2,856
40	3,072	2,979	3,049	2,935
50	3,142	3,028	3,100	2,999
60	3,200	3,091	3,136	3,047
70	3,275	3,166	3,222	3,101
80	3,396	3,264	3,312	3,179
90	3,576	3,490	3,531	3,414
95	3,706	3,601	3,648	3,536
99	4,326	4,218	4,326	4,218
100	38,425	38,370	38,425	38,370

Table 4

Measures of the Equity of the Texas School Finance Formula Under SB 351 in 1991-92 Using Alternative Revenue Totals: Districts with 99 Percent and Districts with 95 Percent of Weighted Average Daily Attendance (WADA)

Measure	Total Revenue Under SB 351	Total SB 351 Revenue Minus Transp. and Career Ladder	Total SB 351 Revenue Minus Proration	Total SB 351 Revenue Minus Transp. Career Ladder and Proration
Districts with 99% of WADA				
Horizontal Equity				
Range ($)	4,619	4,718	4,647	4,718
Coefficient of Variation	11.37	11.64	11.63	11.92
McLoone Index	0.928	0.93	0.918	0.9187
Gini Coefficient	0.054	0.055	0.405	0.437
Fiscal Neutrality				
Correlation	0.582	0.59	0.575	0.582
Elasticity	8.16	8.36	7.66	7.84
Districts with 95% of WADA				
Horizontal Equity				
Range ($)	2,049	2,111	2,077	2,111
Coefficient of Variation	9.86	10.08	10.01	10.26
McLoone Index	0.933	0.933	0.92	0.922
Gini Coefficient	0.048	0.049	0.38	0.415
Fiscal Neutrality				
Correlation	0.477	0.488	0.461	0.471
Elasticity	0.0690	0.0708	0.0630	0.0645

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